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HCSA
HIGH CARBON STOCK APPROACH

THE HCS APPROACH
TOOLKIT

MODULE 1
VERSION 2.0
MAY 2017

THE HCS APPROACH
PUTTING NO DEFORESTATION INTO PRACTICE

The HCS Approach: an introduction, overview and summary

HIGH CARBON STOCK APPROACH

THE HCS APPROACH TOOLKIT V2.0 MAY 2017

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HIGH CARBON STOCK APPROACH

UKaid from the British people

MODULE 1

The HCS Approach: an introduction, overview and summary


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MODULE CONTENTS

By Grant Rosoman (Co-Chair of the HCS Approach), Charlotte Opal (TFT), Patrick Anderson (Forest Peoples Programme), Ravin Trapshah (Asia Pulp & Paper) and Sheun Su Sin (Helikonia).

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INTRODUCTION

The last eight years have seen a transformation in global commodity supply chains towards breaking the link with deforestation. There is now broad global agreement among companies, research institutions, conservation and environmental NGOs, governments, and forest-dependent communities, that tropical deforestation needs to be stopped.[1] Tropical forests hold the greatest diversity of life on Earth and provide a range of services we all need. Without them, people, businesses and the planet will not thrive.

Hundreds of major brands, commodity traders, manufacturers, plantation companies, banks and investors have made No Deforestation commitments, and many have already agreed to protect High Conservation Value (HCV) areas. However, secondary forests that provide essential carbon storage, habitat for biodiversity and forest products for local communities are often not considered to be HCV and are consequently not protected. While some broader definitions of 'forest' exist, these are not practical enough for companies to use when implementing their No Deforestation commitments in the tropics.

[1] The New York Declaration on Forests (www.forestdeclaration.org), the Marrakesh Declaration (available from www.tfa2020.org) and the Bonn Challenge (www.bonnchallenge.org).

[2] Deere, N.J., Guillera-Arroita, G., Baking, E.L., Bernard, H., Pfeifer, M., Reynolds, M., Wearn, O. R., Davies, Z. G., and Struebig, M. J. (2017) Do high carbon stock forests provide co-benefits for tropical biodiversity? *Journal of Applied Ecology. (Submitted).*

[3] Developed by the HCS Science Study commissioned by the Sustainable Palm Oil Manifesto group in 2015 www.simedarbyplantation.com/sustainability/high-carbon-stock (accessed 30 April 2017).

The High Carbon Stock Approach (HCS Approach) represents a breakthrough in this conservation challenge. It is the first practical, field-tested methodology for distinguishing forest areas that should be protected from degraded lands that may be developed, through an integrated land use planning approach. This has allowed agricultural or plantation development to reduce its environmental impact by not clearing forests that are important to local communities or have high carbon or biodiversity values – High Carbon Stock (HCS) forest.

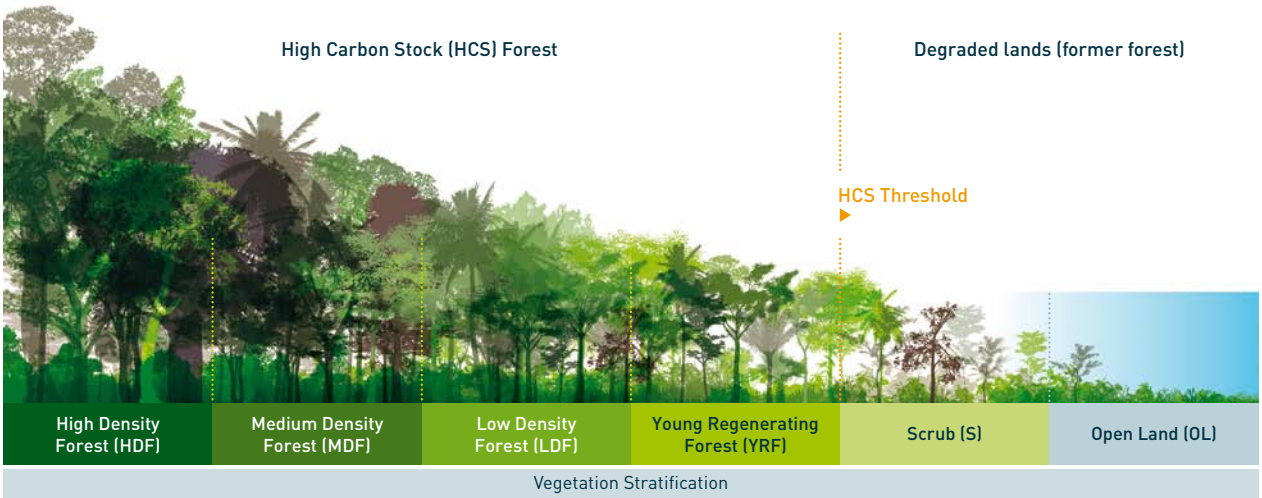
By accounting for variations in local forest types and conditions, the HCS Approach can be applied broadly to identify areas of viable tropical forest. Rather than defining HCS forest by an 'absolute carbon threshold', it uses field data on levels of biomass, vegetation structure and composition, together with a view from above (satellite or Light Detection and Ranging – LiDAR), to create a HCS classification ranging from high-density forest to degraded former forest areas of scrub and open land. Recent research findings have confirmed that the vegetation structure-based methodology classification adopted by the HCS Approach is a good proxy for a range of conservation values, including carbon storage capacity and biodiversity levels (Deere et al. submitted).[2]

Launched in April 2015, the HCS Approach toolkit Version 1.0 standardised the HCS Approach methodology, providing practical, scientifically robust and cost-effective guidance for distinguishing and then protecting viable forest areas. While the toolkit's scope covers any plantation or agribusiness commodity in the humid tropics, its development, trialling and implementation were mainly focused on fragmented landscapes in Asia Pacific and Africa, and with palm oil and pulp and paper plantations.

Version 2.0 of the toolkit contains numerous refinements and additions based on the lessons learned over a further two years of implementation and convergence with the HCS+ methodology.[3]

Key changes in Version 2.0 include:

- Guidance on integrating the HCS Approach with other land use planning approaches in the field, including Free, Prior and Informed Consent (FPIC) and the protection of HCV areas (including peatlands and riparian zones) and areas important to local community livelihoods.
- The use of LiDAR for vegetation stratification.
- A greater focus on ecological and social viability and optimisation with decisions on medium and low priority forest patches.
- Early guidance on the urgent need for protection of HCV areas and HCS forest, including benefits and incentives for local communities.



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Additions have been made to clarify the role of carbon, as well as to provide guidance on implementing HCS with smallholders and farmers, implementing No Deforestation in High Forest Cover Landscapes, and on the HCS Approach Quality Assurance requirements.

However, the core aspects of the HCS Approach are unchanged. Its main purpose is still to differentiate HCS forest from land suitable for development. It still emphasises respect for customary rights and livelihoods. Above all else, the HCS Approach remains a pragmatic tool for land use planning rather than a carbon assessment. It represents a paradigm shift towards the comprehensive integration of forest conservation within any expansion of agriculture or plantations in tropical forest landscapes.

Today, the HCS Approach is in early stages of implementation with other commodities, including rubber and cocoa, as well as in other tropical biomes and in Latin and Central America.

The governance and oversight of the HCS Approach remains with the HCS Approach Steering Group supported through an ongoing collaboration with the High Conservation Value Resource Network (HCVRN) to align and integrate common functions. From mid-2017, all new HCS assessments will need to be joint HCV-HCS assessments.

Addressing community rights in different legal frameworks

The first version of the HCS Approach was designed to work with what has been described as the 'colonial' or 'Asian' model for plantations. In this model, the State allocates land to industry at the expense of diminishing or extinguishing local peoples' rights. In some countries, the legal framework provides few other legal options. However, to ensure conflict-free outcomes that are favourable to both communities and developers and investors, more equitable options need to be developed which give priority to securing peoples' right to land while allowing companies to rent or lease communities' lands subject to their Free, Prior and Informed Consent (FPIC). The revised HCS Approach outlined in this toolkit is designed to be applicable in all such legal frameworks. It makes clear that companies should recognise communities' rights to land and FPIC whether national laws require this or not.

Next steps for the HCS Approach

With the completion of the HCS Approach toolkit Version 2.0 and the stabilising of its core components, there will now be a focus on piloting and trialling an adapted methodology for smallholders and farmers, further trials of the integrated HCV-HCS-FPIC approach, as well as trials of draft social requirements developed as part of the HCS convergence process.

Further development work on large-scale HCS assessments will be undertaken, as will the integration of HCS assessments into national carbon accounting and government-led commitments on Nationally Determined Contributions (NDCs) made under the United Nations Framework Convention on Climate Change (UNFCCC). Further work will also be done to clarify how soil carbon can be used for land use planning, and to establish an approach for addressing No Deforestation in High Forest Cover Landscapes.

As always, the methodology will remain founded on and responsive to the best science available.

"...more equitable options need to be developed which give priority to securing peoples' right to land while allowing companies to rent or lease communities' lands subject to their Free Prior and Informed Consent (FPIC)."

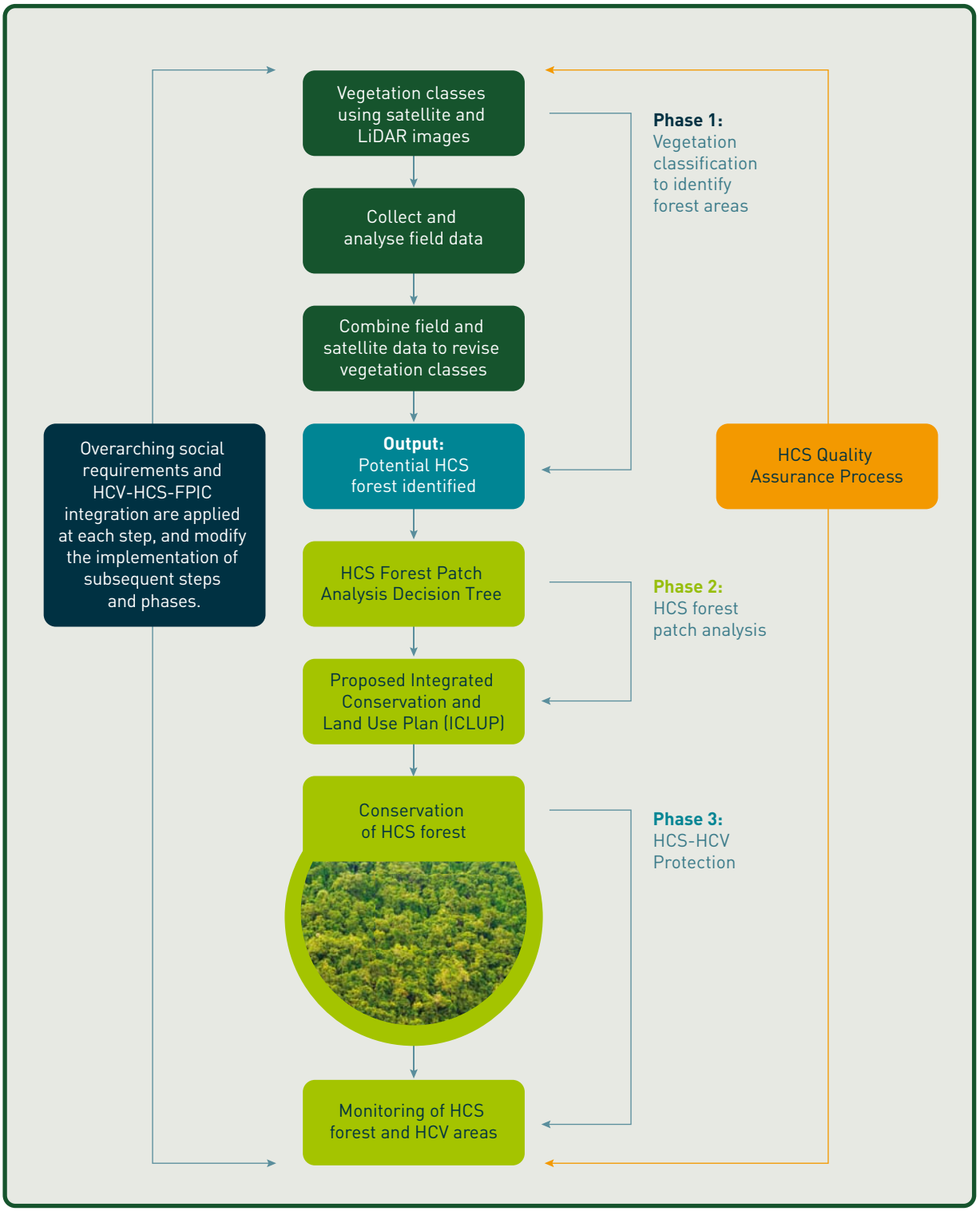
Overview of the HCS Approach

The HCS Approach is a practical methodology for distinguishing forest areas that should be protected from degraded lands that may be developed. It is a sequence of processes and assessments undertaken within two overarching modules: a social requirements module, which focuses on respecting communities' rights to their lands; and an integration module, which includes the FPIC and HCV processes.

The order of the toolkit modules represents the ideal order for HCS Approach implementation. However, when applying the approach to an existing development, it will often be necessary to adjust the sequence to match the stage of development found on the ground. This may include going back to perform tasks from earlier modules, such as participatory mapping or proper FPIC, or to redo a HCV assessment in line with HCVRN requirements before proceeding further. There are a number of issues for which technical guidance is still in development – these are outlined in Module 6. The Quality Assurance requirements are elaborated in Module 7.

This toolkit is intended for use by teams of specialist practitioners with different skills. These skills vary from land tenure analysis and participatory mapping, to satellite imagery analysis, forest inventory, biodiversity assessments and landscape planning. The modules and sections that follow are therefore technical in nature, with the aim that a trained practitioner can use them in the field with little additional guidance.

Outline of the HCS Approach

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Overview of the HCS Approach toolkit Version 2.0

Overarching considerations for the HCS Approach

Phase 1:
Forest and vegetation stratification

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MODULE 2
Social Requirements

The first step: respecting communities' rights to their lands and FPIC.

For the HCS Approach to be successful, and for forests to be conserved, local communities must be engaged and active in the process from the beginning.

This module describes how to include communities in land use planning and integrate the HCS process with Free, Prior, and Informed Consent (FPIC): the right of local communities to give or withhold their consent to any development or conservation affecting their lands, livelihoods and environment. Broader social requirements are presented as a 'working draft' undergoing field trials.

The module includes a case study on how one company handled community conflict during a HCS pilot study.

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MODULE 3
Integration of HCV-HCS-FPIC

The HCS Approach relies on comprehensive HCV assessments and the FPIC of local communities to be put into practice.

Module 3 provides guidance on integrating these three approaches into an efficient, unified process in the field. This delivers integrated land use planning that is more cost-effective for the developer and less burdensome for local stakeholders.

This module includes a case study of an integrated HCV-HCS-FPIC approach trialled on customary owned land in Papua New Guinea.

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MODULE 4
Vegetation Stratification

Initial vegetation classification through satellite and LiDAR image analysis and field data to calibrate the vegetation classification.

The first step in Phase 1 of the HCS Approach is to classify vegetation into classes based on satellite and LiDAR imagery. In the next step, these classes are sampled in the field.

In Module 4, the use of satellite images and LiDAR data, and stratification techniques, are discussed alongside an overview of available image databases and tools. Methods for selecting sample plots, measuring vegetation, estimating above-ground biomass (AGB) and refining the classification are explained.

The output of Phase 1 is an indicative map of HCS forest areas, with patches of HCS forest of varying size and connectivity.

"...there will now be a focus on piloting and trialling an adapted methodology for smallholders and farmers, ...trials of draft social requirements developed as part of the HCS convergence process, ...and to establish an approach for addressing No Deforestation in High Forest Cover Landscapes."

Phases 2 and 3:
Analysing HCS forest patches, proposing an Integrated Conservation and Land Use Plan, and protection of HCV areas and HCS forest

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MODULE 5
HCS Forest Patch Analysis and Protection

Conservation science background and principles, using the Decision Tree for patch analysis, the proposed Integrated Conservation and Land Use Plan (ICLUP), and protection of HCV/HCS forest areas.

The map created in Phase 1 will likely have forest patches that are a range of sizes, shapes and levels of connectedness. Module 5 reviews the conservation science and research on fragmentation and forest patches, and explains how different factors underpin conservation decisions.

This module also describes the HCS Forest Patch Analysis Decision Tree, a tool used to guide a complex set of decisions about each HCS forest patch. Guidance is provided on how patches are classified at each step in the Decision Tree.

The final step in the Decision Tree integrates HCS forests with other conservation and management areas, including peatlands, HCV and community areas, to build a proposal for conservation and development.

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MODULE 6
Developing Issues

Addressing smallholder and community participation, High Forest Cover Landscapes and carbon.

Module 6 highlights emergent issues not currently addressed by the HCS Approach.

The important role that smallholders and communities can play in forest protection is discussed, alongside their needs for relevant support and incentives.

The use of carbon stock data in wider applications (e.g. national and jurisdictional GHG accounting systems, third-party reporting requirements, on-site project activities, etc.) is also considered.

The challenges of applying the HCS Approach in High Forest Cover Landscapes (HFCLs) are explored in the context of case studies under review by the HFCL Working Group.

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MODULE 7
Quality Assurance

Peer review and transparency and monitoring.

HCS Approach Quality Assurance ensures that HCS assessments are reviewed and that maps and summary reports are transparent. It also begins the ongoing monitoring of HCS forest.

Module 7 explains the Quality Assurance requirements, process and activities to date. It covers training for HCS Approach implementation and an outline of the peer review programme for HCS assessments, including the expanding collaboration with the High Conservation Value Resource Network.

It also outlines the challenges and opportunities ahead, as new technologies allow for near real-time monitoring of HCS forest and new partnerships with like-minded organisations emerge.

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Summary of the HCS Approach toolkit

MODULE 2

Respecting communities' rights to their lands and to Free, Prior and Informed Consent through the High Carbon Stock Approach

Development can have a profound impact on indigenous peoples and local communities, but so can conservation. This module covers the issues that any parties wishing to apply the HCS Approach need to consider before undertaking a HCS assessment or protecting HCS forest on customary lands.

Respect for communities' rights and the need to secure livelihoods in forest landscapes are integral to the HCS Approach. Forest-based communities use their lands in diverse ways and these land uses are governed by subtle local systems based on ecological knowledge, practical lore, belief systems and social norms. While these systems are protected under international human rights and environmental laws, almost any intervention – commercial or conservation-based – will inevitably impact the people who depend on them.

The right to Free, Prior and Informed Consent

This module outlines how respect for communities' rights and livelihoods can be integrated within a HCS assessment process to ensure community participation and avoid conflict. The principle of Free, Prior and Informed Consent (FPIC) is introduced as a key tool in this context, enshrining the right of the community to give or withhold its consent to any proposed project affecting lands it customarily owns, occupies or otherwise uses. The FPIC process is set out in detail and guidance is provided on key steps, including preparation, participatory mapping and agreement negotiation. Guidance is also provided for clarifying tenure and management roles. Helping communities to secure their tenure demonstrates respect for community rights, helps to build trust and can foster community commitments to maintain HCS forests. Ensuring clarity on the entities responsible for particular conservation areas is also vital for ensuring accountability and appropriate resource allocation. The module further assesses various participatory monitoring systems and tools that can be used to ensure that HCS conservation areas are managed effectively.

An integrated approach

When establishing new plantations, the HCS Approach should ideally be integrated with other processes such as HCV identification, HCV protection and FPIC from the very beginning. However, it may be necessary in some cases to retrofit the process into existing land use negotiations; for instance, where an operator has started to develop lands prior to adopting the HCS Approach. Guidance on modifying the sequence of HCS assessment steps is provided at the end of Section A of the module.

Section A concludes with a case study that demonstrates the importance of community engagement in the HCS Approach. The study highlights lessons learned in a pilot HCS project at PT Kartika Prima Cipta, a palm oil development area in Kapuas Hulu, West Kalimantan Province in Indonesia, a subsidiary of Golden Agri-Resources Ltd.

Module 2 also includes the working draft of the Social Requirements for Conserving High Carbon Stock Forests in Oil Palm Development. The requirements are being trialled in both palm oil and tree pulp plantation settings, and then refined to provide comprehensive social requirements for the toolkit. This is an integral part of the convergence process between the High Carbon Stock Approach and the HCS+ methodologies.

Photo: TFT ©

MODULE 3

Integration of High Conservation Values, High Carbon Stock Forest and Free, Prior and Informed Consent

This module outlines the integration of the HCS Approach; the Free, Prior and Informed Consent (FPIC) process; and the High Conservation Value (HCV) tool. Combining these approaches into an efficient, unified process will deliver robust land use planning on the ground while being more cost-effective for producers and developers and less onerous and confusing for local stakeholders.

To achieve its goal of being an effective tool for breaking the link between deforestation and commodity production, the HCS Approach relies on two additional approaches to land use planning: HCV assessments and Free, Prior and Informed Consent (FPIC). All three are individually useful, but combined they become a far more powerful tool. This module is a guide to delivering the HCV, HCS and FPIC processes simultaneously in the field. It is divided into three phases.

Pre-Assessment: due diligence, information gathering, scoping study, and consultations

The first step in the Pre-Assessment phase requires the assessment team to ensure that the company or developer satisfies basic requirements. This includes having made a commitment to environmental and social safeguards and a moratorium on land clearance until the integrated plan is finalised. The next step involves collating all relevant environmental, social and geospatial data to understand the environmental and social context of the project site and surrounding area. A scoping report is then prepared and initial consultations with local communities, government representatives and other stakeholders may begin.

Assessment: participatory field assessment, data analysis, consultation and quality control

The Assessment phase begins with a participatory field assessment. A team of experts travels to the site to collect primary environmental, social and socioeconomic data. Environmental data collection must adhere to rigorous scientific protocols while social data must be collected in an inclusive manner that reflects the true composition of the community. To ensure that the full potential impact of the proposed development is understood, maps showing land tenure and community resources are prepared covering the entire community area (not only the portion overlapped by the development).

When all data have been analysed and mapped, the assessment team can start preparing an integrated plan to optimise the outcomes for conservation, development and community livelihoods. A draft Integrated HCV-HCS Assesment Report is prepared and presented to communities, governments, company representatives and the general public for consultation and feedback. Once agreement is reached with local communities, the final draft of the report is submitted for independent peer review and quality control by various bodies – including the HCS Approach Secretariat.

Post-Assessment: ICLUP, community agreement, management and monitoring

Once approved, the assessment is then elaborated into a full Integrated Conservation and Land Use Plan (ICLUP) in which the company outlines its proposed conservation and land use intentions for the site. Following implementation, provisions need to be agreed for participatory management and monitoring, as well as an agile mechanism for resolving any grievances or disputes between the parties.

This module incorporates a case study of how an integrated HCV-HCS-FPIC approach can work in the field. It follows the 2015 trial of an integrated approach undertaken by TFT, Daemeter and New Britain Palm Oil Limited on customary owned land in Papua New Guinea.

MODULE 4

Phase 1: Forest and vegetation stratification

One of the first objectives in a HCS assessment is to identify and map potential HCS forest areas in a development area and its surrounding landscape. This module explains how a combination of airborne Light Detection and Ranging (LiDAR) data, satellite images and field data can be used to achieve this initial goal.

This module is divided into three parts: an overarching section (4a) outlining the methodological approach, a section (4b) focused on land cover and carbon stock classification, and a section (4c) outlining how carbon stock may be estimated by using LiDAR AGB calibration plots and forest inventory plots, and how this data vegetation composition and structure information is used to revise the initial vegetation classification.

Section A: Outline of the process for making the indicative HCS forest map

Three options are presented and evaluated. The first uses a full-coverage airborne LiDAR data set to create an above-ground biomass (AGB) model of the development area (the most accurate option, but also the most costly and complex). The second uses satellite-based land cover classification in combination with a LiDAR transect sample to derive average carbon values for different land cover and forest classes and identify potential HCS forest based on these estimates (less costly and complex, but with a higher degree of uncertainty). The third option combines satellite-based land cover classification and forest inventory data in order to make the same estimates (least costly and complex, but most uncertain).

Practitioners are advised that their choice of option should be based on the desired accuracy and detail required, not only on cost, and that FPIC is needed before any sampling activities are carried out on customary lands.

Section B: Land cover and carbon stock classification

Airborne LiDAR and/or satellite imagery can be used to classify land cover into defined classes. The technical requirements of airborne LiDAR and satellite imagery are described in this section. The methodological approach for classifying satellite imagery (including ground truthing and subsequent accuracy assessment) into these defined classes is described. Whereas the use of full-coverage LiDAR, LiDAR transects, or no LiDAR, will depend on project-specific considerations (e.g. desired accuracy/detail, budget, data availability), a satellite-based high resolution land cover classification (including ground truthing and accuracy assessment) is mandatory for all three options.

Section C: Using field plots to estimate carbon stock and finalise delineation of land cover classes: LiDAR AGB calibration plots and forest inventory plots

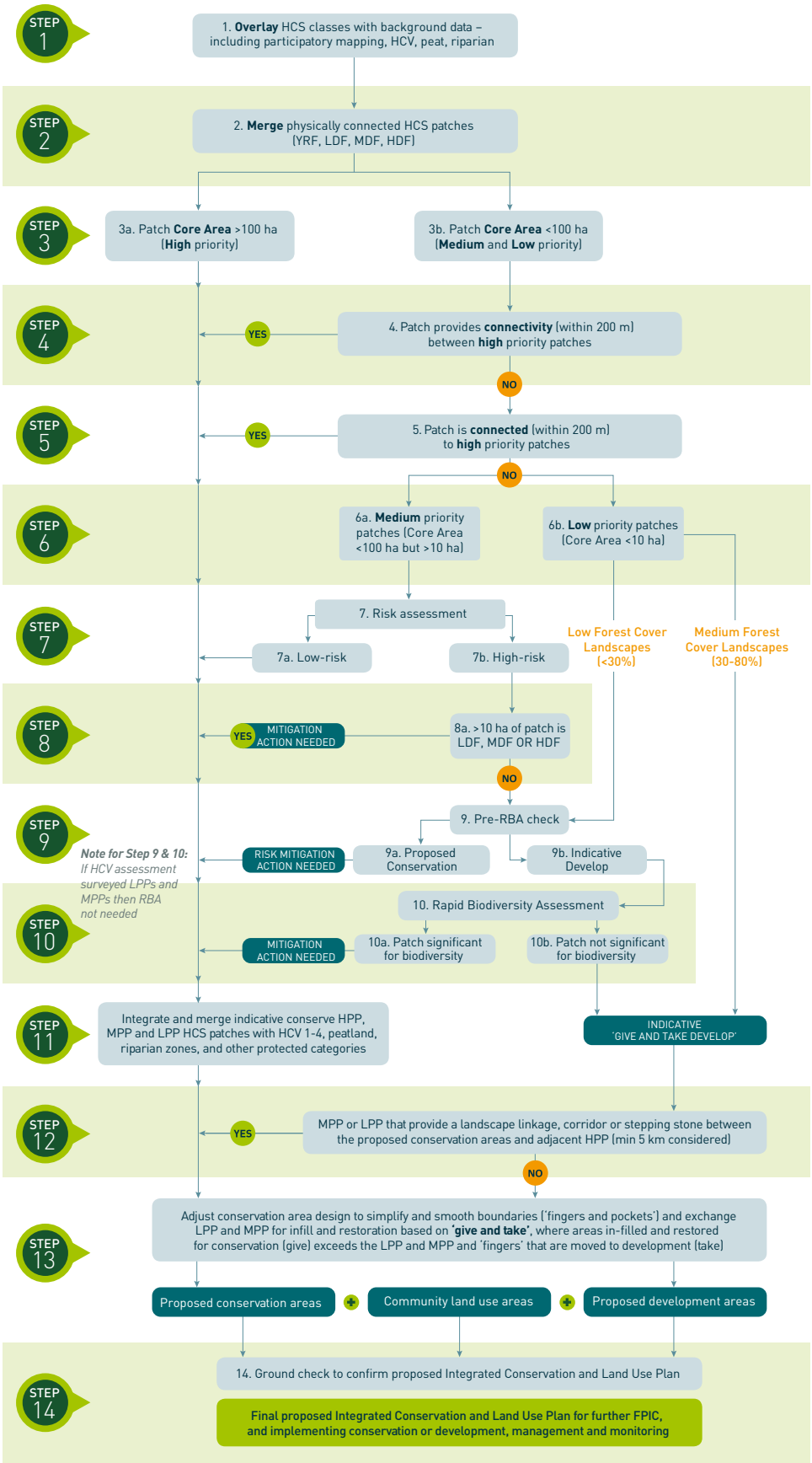
This section explains how to plan and set up the LiDAR calibration or forest inventory plots, conduct measurements, calculate above-ground carbon, derive the LiDAR AGB model and finalise the vegetation classification in order to indicate potential HCS forest areas.

The final output is a map of indicative HCS forest areas, including an average carbon value for each vegetation class, as well as a physical description of the vegetation in each class. This map of potential HCS forest is one input to *Phase 2: Analysing HCS patches and proposing an integrated conservation and land use map*.

MODULE 5

HCS forest patch analysis and protection

Following the identification of potential HCS forest patches, Phase 2 of the methodology analyses these patches using a Decision Tree based on conservation science and then integrates them with other land use information, such as HCV, peatland, riparian zones and community use, to arrive at a proposed Integrated Conservation and Land Use Plan (ICLUP). Finally, Phase 3 covers the mechanisms, benefits and incentives for the protection of HCV areas and HCS forest, as well as management and monitoring to ensure their values are maintained.


STEP 1
1. Overlay HCS classes with background data – including participatory mapping, HCV, peat, riparian
STEP 2
2. Merge physically connected HCS patches (YRF, LDF, MDF, HDF)
STEP 3
3a. Patch Core Area >100 ha (High priority)
3b. Patch Core Area <100 ha (Medium and Low priority)
STEP 4
YES
4. Patch provides connectivity (within 200 m) between high priority patches
NO
STEP 5
YES
5. Patch is connected (within 200 m) to high priority patches
NO
STEP 6
6a. Medium priority patches (Core Area <100 ha but >10 ha)
6b. Low priority patches (Core Area <10 ha)
STEP 7
7. Risk assessment
7a. Low-risk
7b. High-risk
Low Forest Cover Landscapes (<30%)
Medium Forest Cover Landscapes (30-80%)
STEP 8
YES
MITIGATION ACTION NEEDED
8a. >10 ha of patch is LDF, MDF OR HDF
NO
STEP 9
9. Pre-RBA check
Note for Step 9 & 10:
If HCV assessment surveyed LPPs and MPPs then RBA not needed
RISK MITIGATION ACTION NEEDED
9a. Proposed Conservation
9b. Indicative Develop
STEP 10
10. Rapid Biodiversity Assessment
MITIGATION ACTION NEEDED
10a. Patch significant for biodiversity
10b. Patch not significant for biodiversity
STEP 11
Integrate and merge indicative conserve HPP, MPP and LPP HCS patches with HCV 1-4, peatland, riparian zones, and other protected categories
INDICATIVE 'GIVE AND TAKE DEVELOP'
STEP 12
YES
MPP or LPP that provide a landscape linkage, corridor or stepping stone between the proposed conservation areas and adjacent HPP (min 5 km considered)
NO
STEP 13
Adjust conservation area design to simplify and smooth boundaries ('fingers and pockets') and exchange LPP and MPP for infill and restoration based on 'give and take', where areas in-filled and restored for conservation (give) exceeds the LPP and MPP and 'fingers' that are moved to development (take)
Proposed conservation areas
Community land use areas
Proposed development areas
STEP 14
14. Ground check to confirm proposed Integrated Conservation and Land Use Plan
Final proposed Integrated Conservation and Land Use Plan for further FPIC, and implementing conservation or development, management and monitoring

Section A: Conservation science background and principles

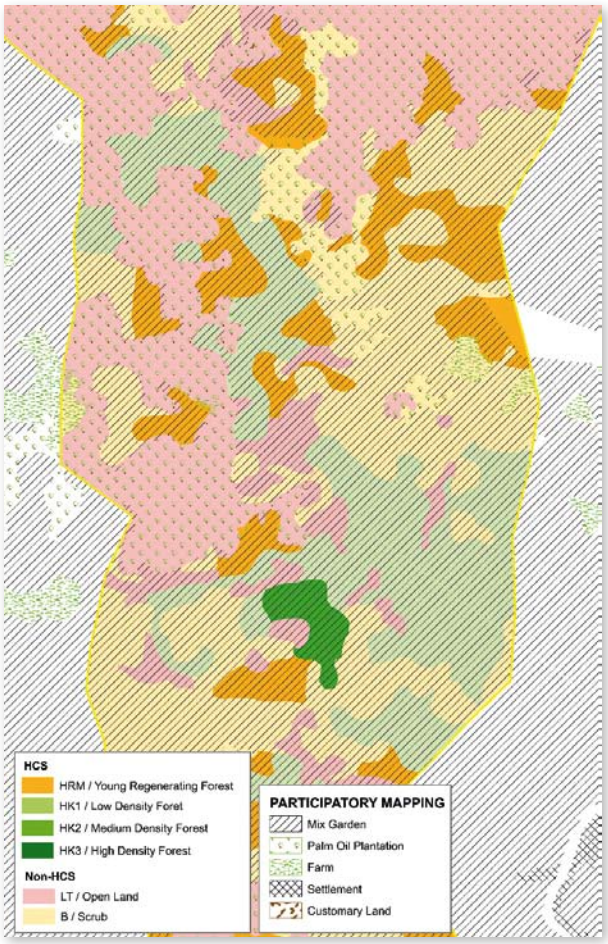
To establish the basis for the analysis of the HCS forest patches, the latest science and research is presented and discussed with the objective of ensuring forest patches that are proposed for conservation are ecologically viable. As patches have a range of sizes, shapes, configuration and degree of connectedness, key factors were chosen for the analysis and thresholds determined for their application. Key factors are the size of the patch 'core' area, the connectivity to other patches (especially large ones), and in the landscape, the level of risk to a patch, and any significant biodiversity values.

Section B: HCS Forest Patch Analysis Decision Tree 2.0

To simplify and standardise the complex decisions that need to be made on HCS forest patches, a Decision Tree is used. This core tool of the methodology is mostly based on GIS analysis. Following integration with other land use planning approaches – including HCV and community participatory mapping – the Decision Tree takes the potential HCS forest patches through to a proposed ICLUP. This includes the concept of 'give and take' derived from the HCS convergence agreement, where isolated Medium and Low Priority Patches (MPP and LPP) are exchanged for infilling, connecting and simplifying the shape of High Priority Patches (HPP).

Section C: Protecting HCS forest and HCV areas: introducing Phase 3 of the HCS Approach process

To achieve the long-term conservation of HCS forest and HCV areas there are a number of important considerations to take into account: the management and monitoring of the areas; the benefits and incentives for communities; and the financing of both conservation area management and community incentives. While this section does not yet constitute technical guidance, it does provide an overview of HCS forest and HCV area protection for further discussion.



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MODULE 6

Issues under development in the HCS Approach

The HCS Approach was developed to assist the implementation of No Deforestation commitments by palm oil and pulp and paper plantation companies operating in fragmented landscapes in the humid tropics of Asia Pacific and Africa. However, it was always intended for broad implementation across commodities and regions. In the development and implementation phase, various situations have arisen in which the methodology does not fit and needs adaptation.

In this module, representatives from the HCS Approach Steering Group and working groups present an outline of these emergent issues, discuss how they may be addressed, share experiences and case studies, and provide updates on progress made. As thinking and innovation around these issues evolves there will be updates and additions to the toolkit that give detailed technical guidance.

Helping smallholders implement the HCS Approach

Smallholder production is a major part of many commodity industries. The inclusion of smallholders in the identification and management of HCS forests will therefore be essential for securing HCS Approach adoption across the landscape. Smallholders may only convert small patches of HCS forest, but these may act as buffers or corridors for larger HCS forest areas, and extensive areas may be collectively cleared over time. The Smallholder Working Group (SHWG) is developing an integrated HCV-HCS approach for smallholders. Standard operating procedures and guidance on identifying and managing HCS forests are currently being field tested in Indonesia. The SHWG is also working to assess smallholder needs, against potential market and governmental incentives. The results of this assessment will inform a pilot project for independent smallholders to implement HCS with support from other stakeholders.

Role and wider applications of carbon and carbon stock data

Carbon and carbon stock data have many potential applications beyond the HCS Approach itself. At the national level, carbon stock data is relevant to national GHG systems and sector level accounting, and has implications for Nationally Determined Contributions under the Paris Agreement. At jurisdictional level, data can be used to demonstrate the value of land and forest-based GHG emission reduction initiatives. Thirdly, at site level, carbon stock data gathered from HCS assessments can also be used to leverage climate finance for HCS restoration and rehabilitation initiatives, or be used as input for RSPO-specific GHG tools.

Applying the HCS Approach in High Forest Cover Landscapes

Applying the standard HCS Approach in places with large areas of contiguous forest may simply lead to the conclusion that large-scale plantation developments are not viable or appropriate. The HCS Approach may consequently have minimal influence over these landscapes, as parties not bound by No Deforestation commitments pursue developments. The HCS Approach could therefore evolve new ways to remain engaged in these landscapes. The HCS Approach Steering Group established the High Forest Cover Landscapes Working Group to consider these challenges by collecting social, environmental, economic and policy information at development area, landscape and national level, and by exploring additional assessment and decision making mechanisms. The goal is to create an accepted and practical approach for supporting development – based on meeting local community rights, livelihoods and aspirations – which does not involve large-scale deforestation.


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MODULE 7

Assuring the quality of HCS assessments – an outline of the HCS Approach Quality Assurance requirements and the challenges ahead

This module describes the current process for assuring the quality of HCS assessments. It also outlines the challenges and opportunities ahead, as new technologies allow for near real-time monitoring of HCS forest conservation and new partnerships with like-minded organisations emerge.

The module covers three main areas: training for implementing the HCS Approach, the peer review programme for HCS assessments, and the transparency and monitoring of implementation of HCS forest protection.

Training for implementing the HCS Approach

Rapid adoption of the HCS Approach is creating a demand for technical experts that can implement the methodology. This module outlines the key components of the training programme developed by the Quality Assurance Working Group to instruct HCS Approach practitioners. It covers the composition and qualifications required within HCS assessment teams, as well as the process by which individuals can become registered practitioners (and by which organisations become Registered Practitioner Organisations).

Peer review of HCS assessments

The Steering Group's long-term goal is to have the HCS Approach incorporated into relevant certification system standards (e.g. RSPO and FSC) and to collaborate with other initiatives, such as the HCV Resource Network. In the interim, the Quality Assurance Working Group has developed a quality review process based on peer reviews of the assessment, and transparency of data, maps and key information from HCS assessment reports. The module covers the six basic steps in this process and identifies further supporting materials.

Transparency and monitoring of the implementation of HCS forest protection

The process of achieving No Deforestation through the HCS Approach is not automatically completed when an ICLUP is finalised with local communities and government. This section outlines requirements for the transparency of the development area and HCS forest maps, and proposals for the monitoring of HCS forest and HCV areas that are being conserved by the community and the developer.

Summary of acronyms

No	Acronym	Term
1	3D	Three dimensional
2	AGB	Above Ground Biomass
3	AGRI	Agriculture estates
4	ALS	Assessor Licensing Scheme
5	AOI	Area of Interest
6	ASPRS	American Society for Photogrammetry and Remote Sensing
7	BPD	Village office and Representative Village Body (Module 2)
8	CBMIS	Community-Based Monitoring and Information Systems
9	CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
10	CLUP	Community Land Use Plan
11	cm	Centimetre
12	CMA	Conservation Management Areas
13	DBH	Diameter at Breast Height
14	DEM	Digital Elevation Model
15	DTM	Digital Terrain Model
16	ENVI	Environment for Visualizing Images
17	ESG	Environmental, Social and Governance
18	ESIA	Environmental and Social Impact Assessment
19	ESRI	Environmental Systems Research Institute
20	ETM+	Enhanced Thematic Mapper plus
21	FAO	Food and Agriculture Organization of the United Nations
22	FIA	Forest Integrity Assessment
23	FORCLIME	Forests and Climate Change Programme
24	FP	Forest Plantation
25	FPIC	Free Prior and Informed Consent
26	FPP	Forest Peoples Programme
27	FSC	Forest Stewardship Council
28	GAR	Golden Agri-Resources Ltd
29	GHG	Greenhouse Gas
30	GIS	Geographic Information System
31	GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Technical Assistance agency)
32	GPS	Global Positioning System
33	HCS	High Carbon Stock
34	HCS+	High Carbon Stock Study
35	HCSA	High Carbon Stock Approach
36	HCV	High Conservation Value
37	HCVA	High Conservation Value Assessment
38	HCVRN	High Conservation Value Resource Network
39	HDF	High Density Forest
40	HFCL	High Forest Cover Landscapes
41	HGU	Hak Guna Asasi (Business use permit)
42	HPP	High Priority Patch
43	ICLUP	Integrated Conservation and Land Use Plan
44	IDH	The sustainable trade initiative

No	Acronym	Term
45	ILO	International Labour Organization
46	IPCC	International Panel on Climate Change
47	IUCN	International Union for Conservation of Nature
48	LDF	Low Density Forest
49	LiDAR	Light Detection and Ranging
50	LPP	Low Priority Patch
51	MDF	Medium Density Forest
52	MINE	Mining areas
53	MPP	Medium Priority Patch
54	MRV	Monitoring, reporting and verification
55	NBPOL	New Britain Palm Oil Limited
56	NDC	Nationally Determined Contributions
57	NDVI	Normalized Difference Vegetation Index
58	NGO	Non-governmental organisation
59	NPP	New Planting Procedure
60	NTFP	Non-timber forest product
61	OL	Open land
62	P4F	Partnerships for Forests
63	PES	Payment for Ecosystem Services
64	PLA	Participatory learning and action
65	POIG	Palm Oil Innovation Group
66	POWI	Palm Oil Welfare Index
67	QMCH	Quadratic Mean Canopy Height
68	RBA	Rapid Biodiversity Assessment
69	REDD+	Reduced Emissions from Deforestation and Forest Degradation
70	RSB	Roundtable on Sustainable Biomaterials
71	RSPO	Roundtable on Sustainable Palm Oil
72	S	Scrub
73	SEIA	Socioeconomic Impact Assessment
74	SH	Smallholder agriculture and use
75	SHWG	Smallholder Working Group
76	SIA	Social Impact Assessment
77	SOP	Standard Operating Procedure
78	TFT	The Forest Trust
79	UN	United Nations
80	UNDP	United Nations Development Programme
81	UNDRIP	UN Declaration on the Rights of Indigenous Peoples
82	UNESCO	United Nations Educational, Scientific and Cultural Organization
83	UNFCCC	United Nations Framework Convention on Climate Change
84	UN-REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
85	WWF	World Wildlife Fund
86	YRF	Young Regenerating Forest
87	ZSL	Zoological Society of London


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HCSA HIGH CARBON STOCK APPROACH

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